WREN®
HYDRAULIC

INSTRUCTION MANUAL

MODEL

RC-150

RC-350

RC-450

IMPORTANT RECEIVING INSTRUCTIONS:

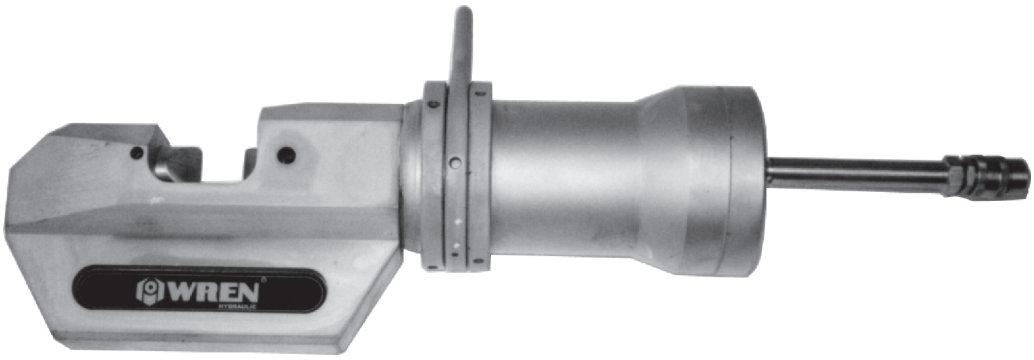
Visually inspect all components for shipping damage. If any shipping damage is found, notify carrier at once. Shipping damage is NOT covered by warranty.The carrier is responsiblefor all repair or replacement cost re sulting from damage in shipment.

IMPORTANT SAFETY INSTRUCTIONS:

WARNING: Your WREN Rebar Cutter is a power tool.To prevent injury to operator or any bystanders from flying steel fragments,strictly observe the following:

SAFETY FIRST !

1. Read ALL instructions.
2. Keep work area clean and well lit.
3. Always wear safety goggle sand full face shield when cuting.
4. Consider the safety of others when cutting.
5. Use extreme caution
   - When cutting pieces under 20cm in length,
   - Watch for possible flying fragments.
6. Before cutting,steel bar must rest fully within cutter blades.
7. Always adjust spacing bolt and tighten before cutting.
8. Keep fingers away from cutting edges during operation.
9. Avoid damaging hydraulic hose
   - Avoid sharp bends and kinks when routing hydraulic hoses. Using a bent or kinked hose will cause severe back-pressure. Also, sharp bends and kinks will internally damage the hose leading to premature failure.
   - Do not drop heavy objects on hose. A sharp impact may cause internal damage to hose wire strands. Applying pressure to a damage the hose may cause it to rupture.
   - Do not use the hydraulic hose to carry a hydraulic component (i.e. pumps, valves, cutter head)
10. Keep hydraulic equipment away from flames and heat.
    -Excessive heat will soften seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance DO NOT expose equipment to temperatures of 70 ^{o}C or higher.
11. To prevent electrical shock,do not use cutter in a damp are a or where it may become wet.



SPECIFICATIONS:

MODEL	: RC150
CUTTING CAPACITY	: MAX.D15mm
CYLINDER CAPACITY	: 20 TONS
WEIGHT	: 14Kg
CUTTING PRESSURE	: MAX.70MPa
DIMENSIONS	: 420mm(L)×105mm(W)×200mm(H)

MODEL	: RC350
CUTTING CAPACITY	: MAX.D25mm
CYLINDER CAPACITY	: 35 TONS
WEIGHT	: 31Kg
CUTTING PRESSURE	: MAX.70MPa
DIMENSIONS	: 580mm(L)×128mm(W)×240(H)

MODEL	: RC450
CUTTING CAPACITY	: MAX.D35mm
CYLINDER CAPACITY	: 45 TONS
WEIGHT	: 49Kg
CUTTING PRESSURE	: MAX.70MPa
DIMENSIONS	: 580mm(L)×167mm(W)×246mm(H)

CAUTIONS BEFORE USE:

- Make sure that the power supply is appropriate for the cutter.As mentioned previously, the cutter requires a three phase 380V,50/60Hz..
- Be sure not to cut material with diameter or hardness that exceeds the machine's capacity. Otherwise,not only the blades could be damaged but also it could result in troubles with interior parts of the machine.
- Don't use the machine in a rainy or damp area,or where it may become wet.
- If the blades is damaged,cracked or distorted, replace it with a new one of WREN genuine blades immediately.Using of damaged blades could cause trouble with the cutter.
- Before delivery,hydraulic oil is filled completely.
- Before inspecting, disassembling or replacing parts of the cutter, be sure to disconnect the power cord from the outlet.

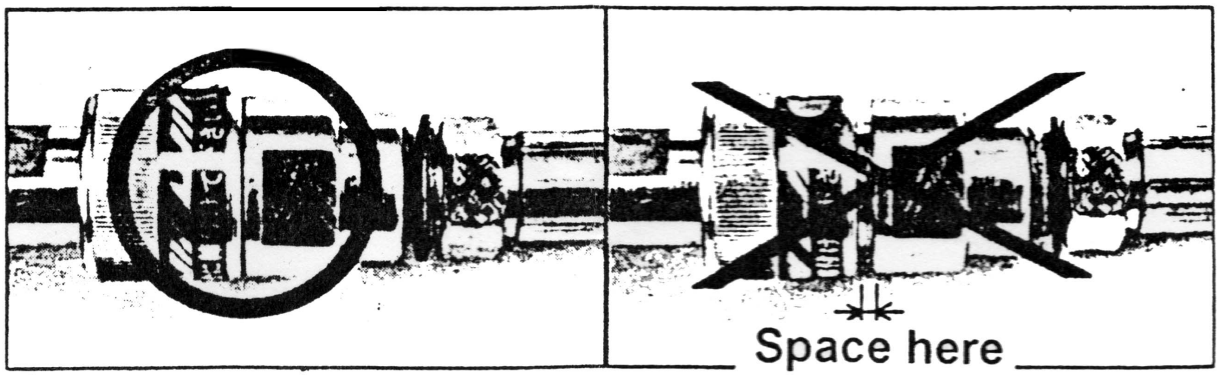
DOUBLE INSULATION:

The double insulation is such that two different insulating materials are used between alive portion, such as a conductor through which a current flowes and an outer frame accessible by the human body. A motor-driven tool haveing such a double insulation is called "double-insulated" and identified with a special marking.
In case of a double-insulated motor, for example,even if one of the two insulation is broken down, the other insulation still provides a protection against an electrical shock,thus ensuring the high safety of the operator.
For maintaining the effect of this double-insulation and ensuring the safe use of cutter for along term, the with other than specified ones or to incorrectly reassemble the electrical system of the cutter. Replacement with other than specified parts or incorrect disassembling/reassembling of the electrical system will cause the double insulation to be broken down, possibly leading to unsafe operation of the cutter.
To avoid the above,only specialized persons have to disassemble or reassemble the electrical system or replace the parts of the system.

CONNECTING THE SYSTEM:

The cutter head and power pack are connected by a 70Mpa operating hose. End of hose will have one male and one female connector.

Connect the hose to cutter head and pump.



INSURE THE CONNECTORS ARE FULLY ENGAGED AND SCREWED SNUGLY AND COMPLETELY TOGETHER.

OPERATING PROCEDURE:

1. Make sure that switch trigger works normally by pulling and releasing, before starting to cut.
2. Set the steel bar on the bar holder between the blades. Make certain the bar is resting fully within the blades. Don't attempt to partially cut through the diameter of the bar. This will cause damage to the blades and cause the steel bar to fly out.
3. By pulling switch,the cutter rod with blade moves toward the bar and cut the bar. Keep the switch pulled until the cutter rod stops at the end of its stocke and cuts the bar completely.
4. Cutter rod is returning automatically when the switch is released after the rod makes full cutting stroke. Hold switch long enough to complete the cutting stroke,then release.
   NOTE: The cutter rod will not his home position automatically unless the switch is released on the way, because hydraulic control valve will not to be opened on the way of the full stroke. Even if the power switch is turned on before the cutter rod has fully returned to the initial position, the cutter rod will not move forward.
5. Use of warn or chipped blades will damage the machine. Replace with new blades before using again.
6. The machine will only operate properly if the hydraulic oil is at its proper level. Check oil level periodically.
7. The cutting capacity of the machine is falling as its temperature is rising. If the machine temperature reaches 70 C or higher, cutting operation should be stoped to allow the machine to cool.

MAINTENANCE:

1. KEEP THE MACHINE CLEAN. It is especially important to keep the sliding portion of cutter rod free from metal chips, scale, dirt or other debris. To clean the cutter rod, turn on the power switch to move the move the cutter rod several times and wipe any debris from the exposed part of the cutter rod.
2. Ragulary tighten all fasteners and replace any worm components.
3. Check oil level periodicity.

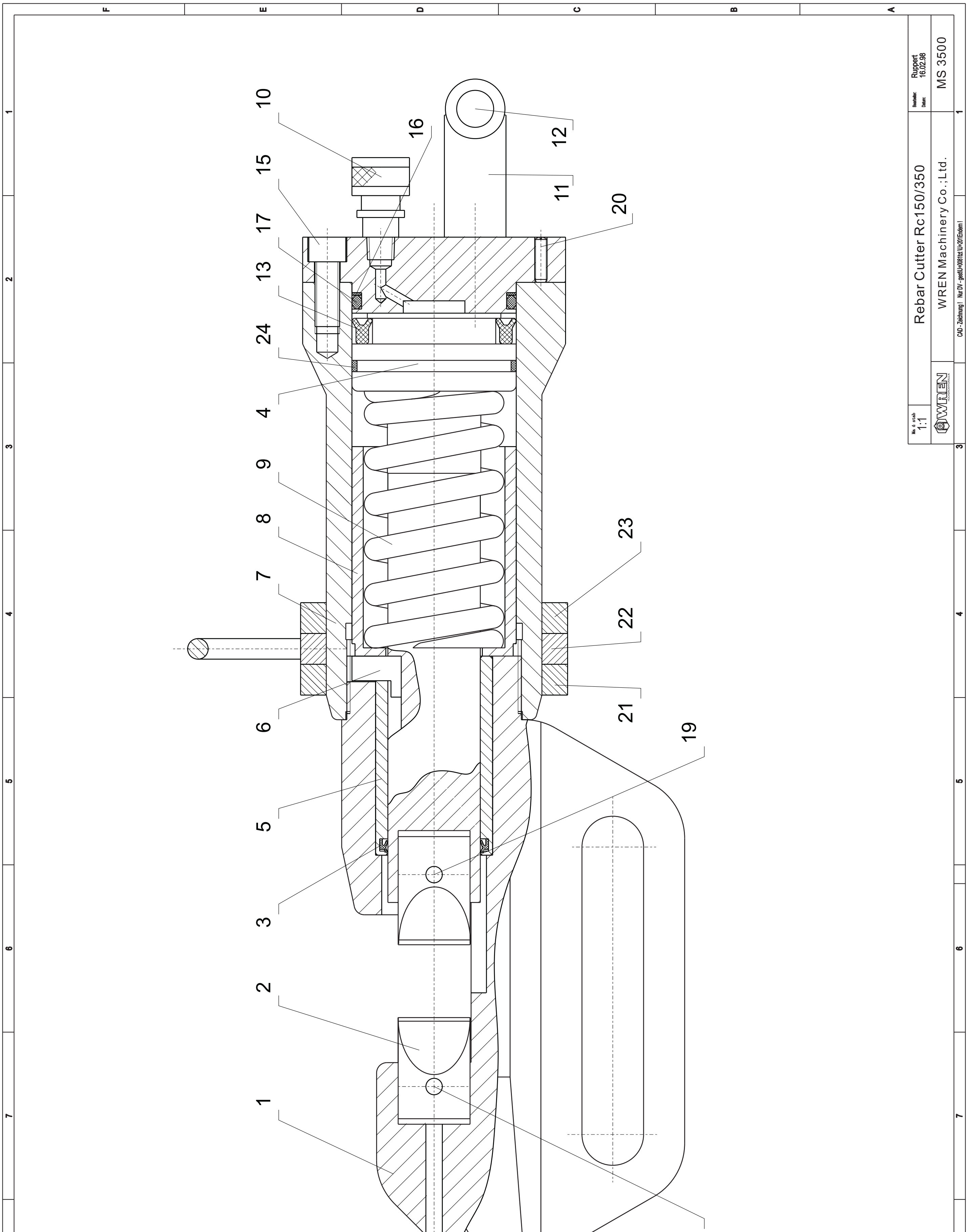
PREVENTIVE MAINTENANCE -Hydraulic Power Packs:

WREN's Hydraulic Power Packs are precision-built hydraulic unit and, as such, do require a certain amount of care and maintenance.

1. **Hydraulic Oil**: Oil should be completely changed after every 40 hours of operation, or at least twice a year. Always make sure the reservoir is filled with fluid. If additional oil is required, use only high-grade hydraulic oil, such as Shell " Tellus oil"#46, Exxon " Teresstic"#46, Aral " Vitam DE" #46 oder vergleichbares.
2. **Quick-Disconnects**: Fittings should be checked periodically for leaks. Dirt and foreign materials should be kept away from fittings. Clean before use.
3. **Hydraulic Gauge**: Gauges are liquid filled. Should this liquid level drop, it indicates external leakage, and replacement it necessary. Should the Gauge fill with hydraulic oil, it indicates internal failure and should be discarded.
4. **Filter on Pump**: The filter should be replaced twice a year for normal use, and more often if pump is in daily use.
5. **Directional Control Valve**: Should malfunctioning occur, disassemble, inspect, and clean.
6. **Motor**: The motor shaft and bearings should be flushed and lubricated once year.
7. **Pumping Unit**: The Pumping Unit should be overhauled every 2 years. This can be done by WREN or by a qualified hydraulic service center.

TROUBLE SHOOTING:

Problem	Cause	Solution
1. Cutter rod does not move forward	Oil shortage or no oil.	Make up oil
	Cutter rod has not returned completely due to reinforcement steel chips,iron power and dirt present in the sliding portion of cutter rod and bar holder.	Push back cutter rod. Clean cutter rod
	Cutter rod has not returned completely due to the distortion or swelling of cutter rod blade.	Tighten blade bolts. Replace cutter rod blades
	Cutter rod has not returned completely due to weak cutter rod return spring.	Make up oilReplace
2. Although cutter rod comes out cutting power is toweak to cut steel bar	Oil is insufficient	There are scratches at tip surface of cylinder or iron power or dirt are sticking there. Clean or replace cylinder
	Contact between cylinder and release valve is improper (Tip surface of projection in cylinder)	Replace
	Breakage of release valve	Replace
	Improper clearence between cylinder and piston	Replace
	Improper contact between cylinder and valve	Replace
	Breakage of rubber packing of cylinder	Replace
3. Oil leaks	Scratches on or breakage of oil leveler sack	Replace
	Scratches at silding portion of bar holder and cutter and at rod seal packing	Replace
	Breakage of liner at joint of bar holder and cylinder	Replace
	Breakage of liner at joint of cylinder and pump case	Replace
	Insufficient tightening of bolts at respective parts	Tighten bolts



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Rebar Cutter Rc150/350
WREN Machinery Co.,Ltd.
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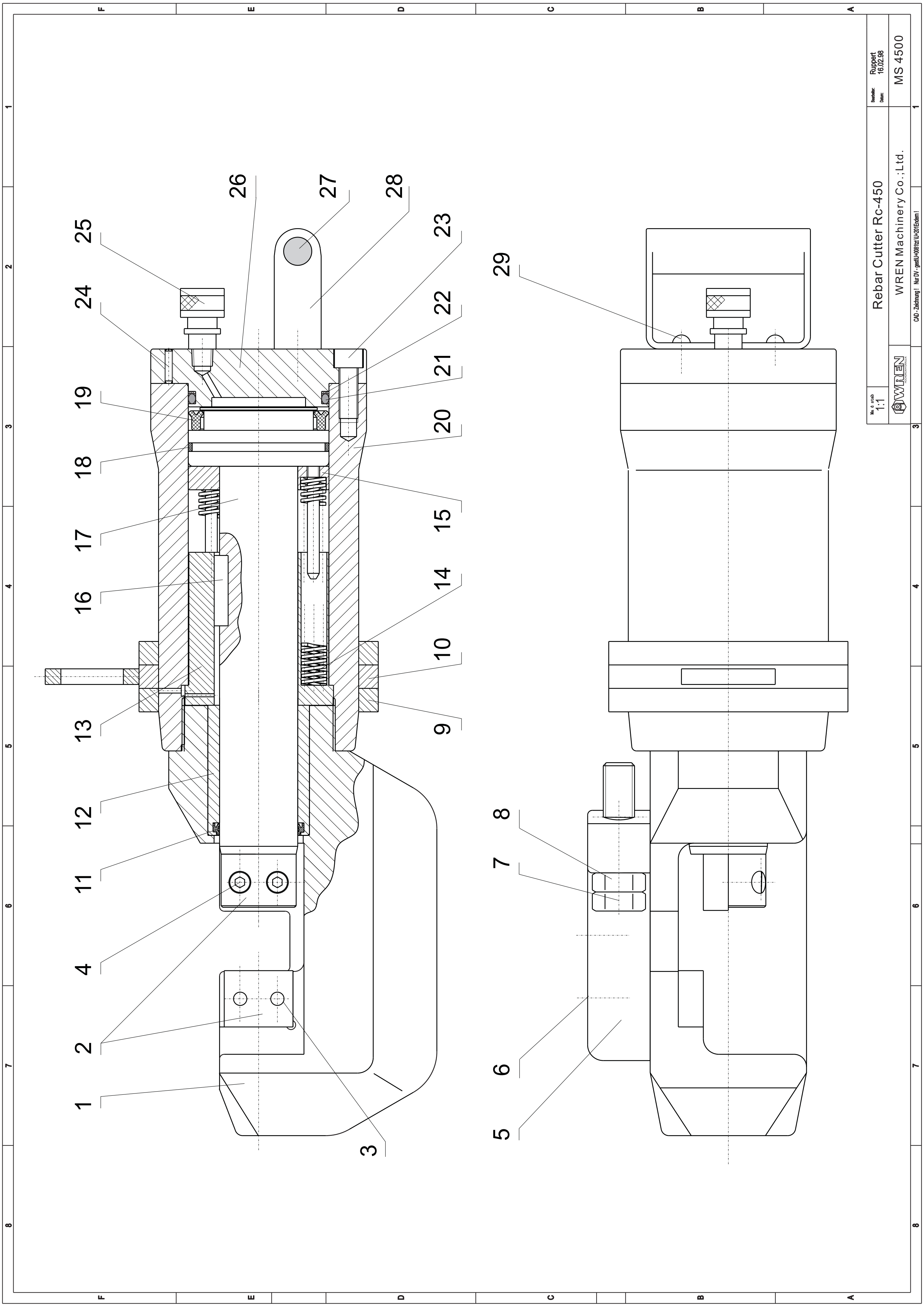

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Rebar Cutter Rc-450
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Parts-List for Model RC150:

No.	Code-No.	Part name / Description	Q'ty Unit	Part Code	Remarks
1	18031510	Bar holder	1		
2	18031590	Blade	2		
3	97015010	Wider	1		
4	18031521	Cutter rod	1		
5	18031512	Copper bushing	1		
6	18031523	Cutter rod key	1		
7	18031532	Cylinder	1		
8	18031534	Stopper ring	1		
9	18031536	Cutter rod return spring	1		
10	58400308	Half coupler	1	CA-902	
11	18031550	Switch bracket	1		
12	18031551	Switch	1		
13	91015010	U-ring	1		
14	93015010	O-ring	1		
15	70851025	Bolt	8	M10×25	Strength Class 12.9
16	95015010	Back-up ring	1		
17	18031538	Cylinder cap	1		
18	79860845	Spring pin	1	ϕ5×45	
19	79860850	Spring pin	1	ϕ5×35	
20	77850820	Set screw	4	M8×20	Strength Class 8.8
21	18031570	Handing ring	1		
22	77850610	Screw	9	M6×10	Strength Class 8.8
23	97015010	Back-up ring	2		
24	99015010	Wear ring	1		

Parts-List for Model RC350:

No.	Code-No.	Part name / Description	Q'ty Unit	Part Code	Remarks
1	18033510	Bar holder	1		
2	18033590	Blade	2		
3	97035010	Wider	1		
4	18033521	Cutter rod	1		
5	18033512	Copper bushing	1		
6	18033523	Cutter rod key	1		
7	18033532	Cylinder	1		
8	18033534	Stopper ring	1		
9	18033536	Cutter rod return spring	1		
10	58400308	Half coupler	1	CA-902	
11	18033550	Switch bracket	1		
12	18033551	Switch	1		
13	91035010	U-ring	1		
14	93035010	O-ring	1		
15	70851230	Bolt	12	M12×30	Strength Class 12.9
16	95035010	Back-up ring	1		
17	18033538	Cylinder cap	1		
18	79860845	Spring pin	1	ϕ8×50	
19	79860850	Spring pin	1	ϕ8×45	
20	77850620	Set screw	4	M6×20	Strength Class 8.8
21	18033570	Handing ring	1		
22	77850812	Screw	9	M8×12	Strength Class 8.8
23	97035010	Back-up ring	2		
24	99035010	Wear ring	1		

Parts-List for Model RC450:

No.	Code-No.	Part name / Description	Q'ty Unit	Part Code	Remarks
1	18034510	Bar holder	1		
2	18034590	Blade	2		
3	70850830	Screw	2	M8×30	Strength Class 12.9
4	70850825	Screw	2	M8×25	Strength Class 12.9
5	18034511	Stopper block	1		
6	70851640	Screw	3	M16×40	Strength Class 12.9
7	57832090	Bolt	1	M20×90	Strength Class 4.8
8	61758620	Nut	1	M20	
9	77850812	Set screw	6	M8×12	Strength Class 8.8
10	18034570	Handing ring group	1		
11	97045010	Wider	1		
12	18034512	Copper bushing	1		
13	18034534	Stopper ring	1		
14	18034537	Cutter rod return spring	10		
15	18034538	Spring seat	1	M12×30	Strength Class 12.9
16	18034523	Cutter rod key	1		
17	18034521	Cutter rod	1		
18	99045010	Wear ring	1		
19	91045010	U-ring	1		
20	18034532	Cylinder	1		
21	93045010	O-ring	1		
22	95045010	Back-up ring	1		
23	71991230	Screw	14	M12×30	Strength Class 12.9
24	77850520	Set screw	2	M5×20	Strength Class 8.8
25	54400104	Half coupler	1	CA-901	
26	18034538	Cylinder cap	1		
27	18034551	Switch	1		
28	18034550	Switch bracket	1		
29	71990612	Screw	2	M6×12	Strength Class 12.9